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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,459	03/27/2004	Julian James Orbach	403047-A-01-US (Orbach)	9320
47523	7590	11/17/2008	EXAMINER	
JOHN C. MORAN, ATTORNEY, P.C. 4120 EAST 115 PLACE THORNTON, CO 80233-2623			NGUYEN, KHAI N	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/810,459

Applicant(s)

ORBACH, JULIAN JAMES

Examiner

KHAI N. NGUYEN

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on July 21, 2008 has been entered. No claims have been emended (claims 18-22 were previously emended). No claims have been canceled (claims 6-8, and 23-37 were previously canceled). No claims have been added. Claims 1-5, 9- 22 are still pending in this application, with claims 1, 9, 13, and 18 being independent.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-5, and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Myllyla (U.S. Patent Number 6,542,436).

Regarding claim 1, Myllyla teaches a method for detecting presence of a user at a telecommunication terminal (Figs. 1-3), comprising the steps of:

testing acoustic paths communicating audio information from and back to the telecommunication terminal (Fig. 1, 1 EMITTING, 2 RECEIVING, A Path, B Path, Fig. 2, Mobile Telephone/Cellular Telephone/Personal Communicator, col. 2 lines 66-67, and col. 3 lines 1-4, i.e., generates a measurement signal from and back to the detection system via acoustic paths); and

determining the presence of the user based on changes in the acoustic paths (Figs. 1-2, col. 3 lines 4-8, i.e., the altered measurement signal is compared to a predetermined threshold value for determining the presence of the user).

Regarding claim 2, Myllyla teaches a method wherein the step of testing comprises the steps of forming a model of the acoustic paths (Figs. 2-3);

detecting modifications in the acoustic paths to update the model of the acoustic paths (Fig. 3, col. 4 lines 32-38); and

the step of determining comprises the step of using the detected modifications to determine changes in the acoustic paths (Fig. 3, col. 4 lines 39-40, i.e., acoustic paths altered by the user's head).

Regarding claim 3, Myllyla teaches a method wherein the step of detecting comprises the steps of applying audio information transmitted from the telecommunication terminal to the model of the acoustic paths (Figs. 2-3);

receiving the transmitted audio information back by the telecommunication terminal via the acoustic paths (Fig. 3, col. 4 lines 41-47);

determining a difference between an output of the model of acoustic paths from the received audio information (Fig. 3, col. 4 lines 48-53); and

calculating a correction to the model of the acoustic paths using the difference and transmitted audio information (Figs. 1-3, col. 4 lines 54-58).

Regarding claims 4 and 11, Myllyla teaches a method and an apparatus wherein the audio information is at one of within human hearing, above human hearing and below human hearing (Figs. 1-5, col. 7 lines 26-29, i.e., acoustic signals range from infrasound to ultrasound).

Regarding claim 5, Myllyla teaches a method wherein the step of determining the presence comprises the steps of developing the model of the acoustic paths with the user presence and not presence at the telecommunication terminal (Figs. 1-3, col. 4 lines 32-40); and

calculating a threshold of changes in the model of the acoustic paths that represents the presence or non-presence of the user at the telecommunication terminal (Figs. 1-3, col. 4 lines 41-58).

Regarding claim 9, Myllyla teaches an apparatus for detecting presence of a user at a telecommunication terminal (Figs. 1-3), comprising:

a transmitter for transmitting audio information (Fig. 1, 1, A, Fig. 2, 1, A, col. 3 lines 58-59);

a receiver for receiving the transmitted audio information via acoustic paths (Fig. 1, 2, B, Fig. 2, 2, B, col. 3 lines 58-61) ;

a model of the acoustic paths for using the audio information before transmission and for producing an audio output (Figs. 1-2, Fig. 3, 1 MEASUREMENT SIGNAL GENERATOR, col. 3 lines 58-59);

a comparator for determining a difference between the audio output and received audio information (Figs. 1-2, Fig. 3, 6 IMPULSE RESPONSE, col. 3 lines 61-65);

a modifier for iteratively generating modifications for the model of the acoustic paths in responsive to the difference and audio information before transmission (Fig. 1, 3 DIGITAL SIGNAL PROCESSING UNIT (DSP), Figs. 2-3, col. 3 61-67, and col. 4 lines 1-2); and

a controller (Fig. 1, 3 DSP) responsive to the modifications for detecting the presence or non-presence of the user at the telecommunication terminal (Fig. 1, 3 DSP, Figs. 2-3, col. 4 lines 2-4).

Regarding claim 10, Myllyla teaches an apparatus wherein the controller further configured for determining modifications when the user is presence and when the user is not presence (Fig. 1, 3 DSP, Figs. 2-3, col. 3 61-67, and col. 4 lines 1-2); and

the controller calculating a threshold from the determined modifications indicating the presence or non-presence of the user (Fig. 1, 3 DSP, Figs. 2-3, col. 4 lines 2-4).

Regarding claim 12, Myllyla teach an apparatus wherein the type of the audio information is controlled by the controller (Fig. 1, 3 DSP, col. 3 line 67, and col. 4 lines 1-2, i.e., measurement signal "audio information" is generated by DSP).

Claim Rejections - 35 USC § 103

4. Claims 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myllyla in view of Dent et al. (U.S. Patent 5,680,450 hereinafter "Dent").

Regarding claims 13 and 18, Myllyla teaches an apparatus and a method for detecting presence of a user at a telecommunication terminal (Figs. 1-3), comprising: canceling echoes caused by acoustic paths to audio information from and back via the echo path (Fig. 3, 3 ECHO PATH, col. 4 lines 32-40, i.e., generates a measurement signal from and back to the detection system via acoustic paths/echo paths); and

a controller (Fig. 1, 3 DIGITAL SIGNAL PROCESSING UNIT (DSP)) responsive to changes in the echo path for determining the presence and non-presence of the user at the telecommunication terminal (Figs. 1-3, col. 3 lines 4-8, and col. 4 lines 54-59, i.e., the difference is compared to a predetermined threshold value for determining the presence or non-presence of a user).

However, Myllyla does not specifically disclose the echo canceller. Although Myllyla teaches the Digital Signal Processor (DSP) detects a generated measurement signal via the echo path (Myllyla - Fig. 1, 3 DSP, Fig. 3, 3 ECHO PATH, col. 3 lines 57-67, and col. 4 lines 1-4). In addition, Myllyla teaches this telecommunication terminal comprises a mobile telephone/cellular telephone (Myllyla – col. 3 lines 6-8) which is inherited an echo canceller/echo detector by design.

In the same field of endeavor, Dent teaches an echo canceller/echo detector for canceling echoes caused by acoustic paths to audio information from and back to the echo canceller, and this echo canceller can be implemented by the DSP (Dent – Figs. 1-4, col. 3 lines 49-67, and col. 4 lines 45-47, lines 52-54).

It would be obvious to one of ordinary skill in the art at the time of the invention was made to apply a known technique to a known device (i.e., implement echo canceller with DSP) ready for improvement to yield predictable results (see KSR - MPEP 2143). Therefore, it would be obvious to incorporate the echo canceller implemented with the DSP, as taught by Dent, into Myllyla's method and system in order to enhance the detection of a user presence.

Regarding claims 14 and 19, Myllyla teaches a method and an apparatus wherein the audio information is at one of within human hearing, above human hearing and below human hearing (Figs. 1-5, col. 7 lines 26-29, i.e., acoustic signals range from infrasound to ultrasound).

Regarding claims 15 and 20, Myllyla teach an apparatus and a method wherein the type of the audio information is controlled by the controller (Fig. 1, 3 DSP, col. 3 line 67, and col. 4 lines 1-2, i.e., measurement signal "audio information" is generated by DSP).

Regarding claims 16 and 21, Myllyla teaches an apparatus and a method with a model of the acoustic paths (Figs. 1-3);

a modifier for generating modifications to the model based on changes to the acoustic paths ((Fig. 1, 3 DIGITAL SIGNAL PROCESSING UNIT (DSP), Figs. 2-3, col. 3 61-67, and col. 4 lines 1-2); and

the controller (Fig. 1, 3 DSP) responsive to the generated modifications for determining the presence or non-presence of the user at the telecommunication terminal (Fig. 1, 3 DSP, Figs. 2-3, col. 4 lines 2-4).

Myllyla does not specifically disclose the echo canceller/echo detector. Although, Myllyla teaches this telecommunication terminal comprises a mobile telephone/cellular telephone (Myllyla – col. 3 lines 6-8) which is inherited an echo canceller/echo detector by design.

In the same field of endeavor, Dent teaches an echo canceller/echo detector comprises a model of the acoustic paths (Dent - Figs. 1-4, col. 3 lines 49-67).

Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to incorporate the echo canceller/echo detector with a model of the acoustic paths, as taught by Dent, into Myllyla method and system in order to enhance the detection of a user presence.

Regarding claims 17 and 22, Myllyla teaches an apparatus and a method wherein the modifier responsive to a difference in an output of the model of the acoustic paths to audio information before transmission and received audio information via the

acoustic paths for generating the modification based on the difference and the audio information before transmission (Figs. 1-3, col. 3 lines 1-6).

Myllyla does not specifically disclose the echo canceller/echo detector. Although, Myllyla teaches this telecommunication terminal comprises a mobile telephone/cellular telephone (Myllyla – col. 3 lines 6-8) which is inherited an echo canceller/echo detector by design.

In the same field of endeavor, Dent teaches an echo canceller/echo detector comprises a model of the acoustic paths (Dent - Figs. 1-4, col. 3 lines 49-67).

Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to incorporate the echo canceller/echo detector with a model of the acoustic paths, as taught by Dent, into Myllyla method and system in order to enhance the detection of a user presence.

Response to Arguments

5. Applicant's arguments filed July 21, 2008 have been fully considered but they are not persuasive.

In response to Applicant's argument in general, that the reference does not teach or reasonably suggest the functionality upon which the Examiner relies for the rejection. The Examiner first emphasizes for the record that the claims employ a broader in scope than the Applicant's disclosure in all aspects. In addition, the Applicant has not argued any narrower interpretation of the claim limitations, nor amended the claims significantly enough to construe a narrower meaning to the limitations. Since the claims breadth

allows multiple interpretations and meanings, which are broader than Applicant's disclosure, the Examiner is required to interpret the claim limitations in terms of their broadest reasonable interpretations while determining patentability of the disclosed invention. See MPEP 2111. In other words, the claims must be given their broadest reasonable interpretation consistent with the specification and the interpretation that those skilled in the art would reach. See *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000), *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999), and *In re American Academy of Science Tech Center*, 2004 WL 1067528 (Fed. Cir. May 13, 2004). Any term that is not clearly defined in the specification must be given its plain meaning as understood by one of ordinary skill in the art. See MPEP 2111.01. See also *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), *Sunrace Roots Enter Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003), *Brookhill- Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir.2003).

The interpretation of the claims by their broadest reasonable interpretation reduces the possibility that, once the claims are issued, the claims are interpreted more broadly than justified. See *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993). Therefore, the failure to significantly narrow definition or scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has

interpreted the claims in parallel to the Applicant in the response and reiterates the need for the Applicant to distinctly define the claimed invention.

Regarding claims 1-5 and 9-12, Applicant argues that "Myllyla does not disclose or suggest detecting the presence of the user - - -" (See Applicant's Remarks, page 13 lines 1—11), and "- - - only an object (the head of the user) is being detected." (See Applicant's Remarks, page 13 line 26 through page 14 line 1).

The Examiner respectfully disagrees. Since the claims do not specify any definition or limitation in the claims on "the presence of a user". And thus it is up to one of ordinary skill in the art to take the broadest interpretation. It is noted that Applicant's filed specification described "detecting a presence of a user at a telecommunication terminal by at least one of a change in the acoustical path around the telecommunication terminal" (See Applicant's specification page 2, lines 16-18). So, to one of ordinary skill in the art, "the presence of a user" is interpreted as the presence of any parts of a user (i.e., any parts of a human body such as hands, arms, head, etcetera).

As shown in the rejection above, Myllyla discloses a method for detecting if a user is in proximity to the telecommunication terminal wherein the proximity detection method and system are based on acoustic principle (See Myllyla – Figs. 1-4, 5A-5B, column 2 lines 11-21). Myllyla also disclose a simplified example of system which utilizes the change in the acoustic path around a mobile phone such as the presence of the user's head (See Myllyla – Fig. 3, column 4 lines 27-40), and Applicant's Remarks

concedes that Myllyla discloses "- - - an object (the head of the user) is being detected."
(See Applicant's Remarks, page 13 line 26 through page 14 line 1).

And therefore, the rejection of independent claims 1, 9, and their dependent claims 2-5, and 10-12 is proper and maintainable.

Regarding claims 13-22, again Applicant's argument is the same as above that "Myllyla does not disclose determining the presence or non-presence of the user - - -"
(See Applicant's Remarks, page 15 lines 9—11).

The Examiner respectfully disagrees. For the same reasons set forth above, Myllyla clearly discloses a method for detecting if a user is in proximity to the telecommunication terminal wherein the proximity detection method and system are based on acoustic principle (See Myllyla – Figs. 1-4, 5A-5B, and column 2 lines 11-21). Myllyla also discloses the telecommunication terminal comprises a mobile telephone/cellular telephone (See Myllyla – col. 3 lines 6-8) which is inherited an echo canceller/echo detector by design. It is very old and well known in the art about the technique to implement the echo canceller/echo detector by using the Digital Signal Processor (DSP) wherein Myllyla discloses the use of a DSP and the echo path (See Myllyla - Fig. 1, 1, 2, 3 DSP, A, B, Object, and Fig. 3, ECHO PATH, 2, 4, column 2, lines 31-41). Again, as shown in the rejection above and Applicant's Remarks concedes that Dent "does disclose an echo canceller" (See Applicant's Remarks, page 15 lines 13-15). In 1997, Dent discloses an echo canceller implemented with the DSP (See Dent – Figs. 1-4, column 4 lines 45-54), and thus it is simply to apply a known technique to a known

device (i.e., implement echo canceller with DSP) ready for improvement to yield predictable results (see KSR - MPEP 2143).

And therefore, the rejection of claims 13-22 as being unpatentable over Mytlyla and Dent is proper and maintainable.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **KHAI N. NGUYEN** whose telephone number is (571)270-3141. The examiner can normally be reached on Monday - Thursday 6:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad F. Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. N. N./
Examiner, Art Unit 2614

11/10/2008

/Rasha S AL-Aubaidi/
Primary Examiner, Art Unit 2614